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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/27701

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 B01D53/00 B01D47/00 F23J15/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 B01D F23J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 691 153 A (THE BABCOCK & WILCOX COMPANY) 10 January 1996 (1996-01-10) column 4, line 5 - line 54; figure 3 ----	1, 3-8, 16, 17
X	US 5 080 696 A (DENIS MARCHAND) 14 January 1992 (1992-01-14) column 2, line 32 -column 4, line 17; figure 1 ----	1, 3, 4, 16, 17
X	FR 2 586 204 A (PAUL TISSANDIER) 20 February 1987 (1987-02-20) page 4, line 15 -page 6, line 10; figure 1 -----	1, 3-5, 8, 9, 16, 17

 Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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T later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

Date of mailing of the international search report

16 December 2003

23/12/2003

Name and mailing address of the ISA

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 691153	A	10-01-1996	US EP JP	5510087 A 0691153 A1 8105620 A	23-04-1996 10-01-1996 23-04-1996
US 5080696	A	14-01-1992	FR CA DE DE EP IE	2655564 A1 2031432 A1 69030300 D1 69030300 T2 0432074 A1 904429 A1	14-06-1991 09-06-1991 30-04-1997 10-07-1997 12-06-1991 19-06-1991
FR 2586204	A	20-02-1987	FR	2586204 A1	20-02-1987

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